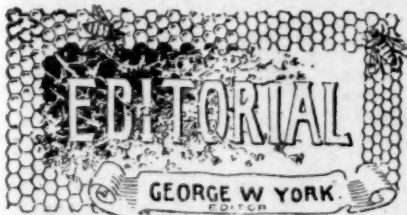


ESTABLISHED IN 1861 THE AMERICAN OLDEST BEE-PAPER IN AMERICA

BEE JOURNAL

Weekly, \$1 a Year. } DEVOTED EXCLUSIVELY— } Sample Copy Free.
TO BEE-CULTURE.

VOL. XXXIII. CHICAGO, ILL., MAY 10, 1894. NO. 19.



Some Mistakes Corrected.—On page 600 will be found something from General Manager Newman, about the Bee-Keepers' Union and the adulteration of honey, in which he explains some things.

Mr. Ernest Myers, of Iowa, said this in a letter we received from him on May 4, 1894: "I have been very well pleased with the last year's copies of the BEE JOURNAL, and its work, for it has been a great help to me in bee-culture; and also the book 'Bees and Honey.'"

They "Caned" a Bee-Keeper.—Prof. C. L. Buckmaster, who is a bee-keeper, is also the principal of the public school of Sturgeon, Mo. After the graduation exercises of the "Class of '94," on April 19th, they kindly presented to him a "nice, gold-headed cane," as a memento of their appreciation. Mr. B. says that bee-keeping and school principal go well together, as the children entertain him during eight months of the year, and the bees come in on the other four months, to keep him from becoming lazy. That's good. More school-teachers might profit, both in health and in pocket-book, if they were to follow Mr. Buckmaster's example.

Storing Honey in the Sections.

—Dr. Wm. R. Howard, of Texas, when writing us on April 27th, said: "Bees are booming now on several wild flowers; the silk-weed is now coming on." And on May 1st he wrote: "Bees are storing honey in the sections now." We think this is the first report we have received this year, stating that bees were putting honey in the sections. But Texas is a great State—and so are a good many others!

Trade is Extremely Good, says one of the large dealers in bee-supplies in an exchange. "In fact, we are selling more supplies now than we were last year at this time"—so they report. That's good. We hope it may be a splendid year, not only for supply dealers, but for all beekeepers and—especially, bee-papers.

Honey Under Tariff Reform.—We have received the following statement from Hon. Eugene Secor, regarding the subject of honey under "tariff reform:"

I have the "Wilson Bill" as it passed the House, and as reported to the Senate from the Finance Committee on March 20th, prepared for publication under the direction of the Committee on Finance April 2, 1894. "How does it affect the bee-keeping industry?"

The present duty, as you are doubtless advised, is 20 cents per gallon (about 1½ cents per pound). A person would naturally infer from the wording that Congress did not intend to levy a duty on imported comb honey, but it has been decided by a Collector of Customs that comb honey is also dutiable, and by the method of reducing comb honey to gallons, it would amount to about 2 cents per pound, as nearly as I am able to guess.

Under the Wilson Bill as it passed the House, the duty is placed at "10 cents per

gallon." As recommended by the Senate Finance Committee it is "20 per cent. *ad valorem*."

The compilation prepared by the Committee above referred to has also an average *ad valorem* computation, which on the article "Honey" is carried out as follows:

Present duty 44.83 per cent.; House Bill 22.42 per cent.; Senate Bill 20 per cent.

It will therefore be evident without argument that matters are getting no better for the honey-producer in the United States under tariff revision.

Imports under the present law for the fiscal year ending June 30, 1893, were 97,706 gallons—equal to about 1,172,472 pounds.

If the duty should be reduced one-half or more, it is fair to suppose that imports of honey would increase. Are the beekeepers of the United States so prosperous and magnanimous that they are willing to divide their profits with Cuba and South America?

But how about those articles that are supposed to come in competition with honey—sugars and molasses? Under the present law they are free. Under the Senate Bill molasses is protected about 15 per cent. *ad valorem*, and sugars from 25 to 36 per cent. The raisers of cane are to be protected, and the producers of honey left to shift for themselves.

"What are you going to do about it?" That's the vital question.

Every honey-producer in the United States has two Senators to whom he can write and tell what he thinks about the matter. It doesn't matter whether he belongs to your political party or not. He will feel honored in receiving a letter from you. Even a postal card will do good if it has the right words on it. Try it. They want to know whether we have sense enough to look after our own interests. They will think more of us if we stand by our pursuit as though we were not ashamed of it.

EUGENE SECOR.

Forest City, Iowa, April 28, 1894.


We trust that the BEE JOURNAL readers will write to their several Senators in Washington, as suggested by Bro. Secor, telling them their wishes in the matter. Now, please don't write us a long article on political "tariff reform," for it will only be a waste of time. If you think it would be a good thing to retain the existing tariff on honey, just write and tell your Senators so; if you think the proposed reduction would be a wise thing, let them know that. Of course, if you have no "think" at all on the subject, like some folks that we know, likely the best thing you can do is to "saw wood and say nothing."

Have You Read the wonderful Premium offer on page 605?

Heddon's Honey.—In *Gleanings* for May 1st, we find only the following paragraphs about the Heddon controversy:

In the closing paragraph on page 335, we by no means intimated that Mr. Heddon could not occupy further space if he had *important testimony* to bring forward; and right in this line we are pleased to announce that he has finally submitted to us the "original manuscript" of testimonials from men who purchased his honey, nearly all of whom speak well of it. These testimonials are filled out on printed blanks that Mr. Heddon placed before his customers, and are in answer to a series of questions.

Now, it seems to us we have given Mr. Heddon not only a fair hearing, but the advantage of his strongest points in rebuttal of the analyses; but if Mr. H. thinks we have not, we have decided we will go one step further: We will allow him the space of one page of *Gleanings* to bring up any other new points (that is, anything that will explain how that large amount of glucose got into the honey he sold to us and to his customers), over his own signature. Certainly Mr. Heddon could not ask more than this. After this we hope it will not be necessary to prolong this matter further.

 Mrs. C. J. White, of Minnesota, writes thus on May 2, 1894: "I shall always take the BEE JOURNAL as long as I keep bees. It has been worth many times the cost in my bee-keeping."

Wagner's Flat Pea.—A honey-plant that will give such a yield of honey as to pay big rent for the land it occupies, independently of any other crop, although eagerly sought after during the past few years, seems now hardly to be expected. High expectations have been aroused from time to time, but those expectations have not been fulfilled. Witness Chapman's honey-plant, figwort, spider-plant, and perhaps others. But hope has not been given up as to plants which yield paying crops independently of the honey-yield. Melilot seems to have a hard time to fight its way to recognition, but there are those who stand loyally by it, and hope yet to see it fully recognized as a valuable forage-plant.

Just now our German friends are very much stirred up over a new forage-plant for which great things are claimed. After making all due allowance for enthusiasm over new things, it certainly looks as though it would be worth while to give on this side the water a thorough trial to the

Lathyrus Sylvestris Wagneri, or "Wagner's flat pea."

It seems that Herr Wagner, of Munich, Germany, has been at work for the past 30

tion of the plant shows something much like the sweet-pea, to which it is closely related.

The roots are said to penetrate the hard-



WAGNER'S FLAT PEA (*Lathyrus Sylvestris Wagneri*).

years, crossing and improving, and from a bitter weed has developed a succulent forage-plant unusually rich in sugar, and relished by all kinds of stock. The illustra-

est, driest and rockiest soils, reaching to the depth of 10 or 20 feet. A dry season does not affect it. Once started it will last for 50 years. Barren land occupied by it is

changed to fertile soil. Those who understand how red clover takes so much of its nourishment from the air, will not have so much difficulty in believing this. This flat pea belongs to the *leguminosa*, as well as clover.

Cows fed on this plant give forth more milk than when fed on clover, and we hardly dare say how much more butter. Some of the German friends count the introduction of this plant equally important with that of the potato.

Railroad companies are planting it along their embankments and deep cuts, so that its long roots may prevent washing away of the soil.

Four tons of dry hay per acre are obtained, three cuttings being made. The first cutting takes away all chance for a honey crop at that time, but, if we understand it correctly, the bees have a rich harvest on its blossoms after the first cutting, and not until October is its yield of nectar over.

Of course we are only giving what is reported, and it remains to be seen whether the plant is of value in this country. A somewhat serious drawback is the difficulty of getting a start. It is very liable to kill out during the first or second winter.

As yet the price of seed is high—\$3 or \$4 per pound. Bro. Root is quite enthusiastic over it, and is sending out 5-cent samples of the seed.



CONDUCTED BY
MRS. JENNIE ATCHLEY,
BEEVILLE, TEXAS.

The Texas State Convention.

The 16th annual convention of the Texas State Bee-Keepers' Association met on April 4th and 5th, 1894, at the residence of Wm. R. Graham, at Green-ville, about 60 members being present.

The convention opened with prayer

by the President, Rev. Dr. Marshall. The Secretary, Mr. E. J. Atchley, being absent, Dr. Wm. Howard was chosen Secretary *pro tem*.

The President read his annual address as follows:

President Marshall's Address.

In making the 16th annual report of our Texas State Bee-Keepers' Association, it is with pleasure we mark the progress that has been made. There were at the time of our organization but few bee-keepers in this section, and they were ignorant of many of the improvements and discoveries now in use. The chief mover in our association, and the prince of bee-keepers—Judge W. H. Andrews—has passed away. Peace to his ashes. The numbers have largely increased, and a large establishment for the manufacture of apiarian supplies has been established, and operated by our brother W. R. Graham, one of the first members, and a prime mover of our organization. We come together again to renew our greeting, and drop a tear of regret for those who are gone, and come no more.

The object of our meeting is to promote the interest of our beloved and chosen industry, as well as to renew our personal friendships. We come together to give each other's discoveries and experiences, and to gather from general experience those facts that will make our industry more successful, as well as more profitable.

The subjects that should claim our attention are so numerous that I cannot mention all of them. They may all be summed up in the general questions of what will reduce labor and increase profit?

1. The first question would be, what hive to use. This question will probably never be settled. Different views will probably always prevail on this subject. And yet this is an important subject, and one that lies at the foundation of all success. There are a great many hives that have all the elements of success, and probably the success of each of them is about equal. From my own experience, for this climate, I much prefer the shallow frame; especially for comb honey. The Langstroth frame, six inches deep, is my preference. I would prefer this size, with nine frames for the brood-nest. The question will probably only be settled by individual preference.

2. The next question will be, what bee to use. It has been very generally decided, all things considered, that the Italians, for all purposes, are the best.

There is some danger of sacrificing interest to beauty. The color craze may be carried to such an extent as to overlook utility. The very yellow and five-banded bees are the rage, whether they are good for honey, long lived, or prolific. The best queen I ever had was a dark, leather-colored imported queen. Her progeny were very large and prolific. Let us look more to utility than appearance.

3. Another question would be, how to secure the largest yield of honey, especially of honey in supers. It is unnecessary to say that bees must be bred up in the spring, so as to be ready to take advantage of the first honey-flow. This may require some feeding in early spring. How to make the bees work in the supers is a question of interest. Various methods have been tried, but probably none of them entirely satisfactory or successful. I have sometimes found it worked to place a section or two in the brood-nest, and when filled place them above. When the sections have been partially filled, and the honey-flow failed, I have scored the combs below, and thus made them carry the honey above.

4. Then there is the question of marketing honey. I have not asked these questions so much with the desire of answering them, but only to suggest them.

It may be asked, what of Texas as a bee country? That all portions of the State, and all localities are good honey-producing places, may be doubted. That as a whole it is a good bee-country, is true. We are free from the trouble and expense they have in the North in wintering bees. The seasons are longer, and the honey-producing plants more numerous.

Queen-rearing in Texas is destined to become an important and remunerative branch of our industry. That large profits can be realized from the bee here, without care, labor, industry and science is not true. With care, industry, the use of the improvements, and best methods, a reasonable profit may be realized almost any year.

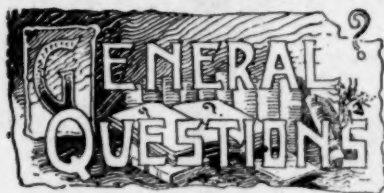
At the opening of the 17th year of our association I greet you with the bright prospects which are open before you, and invite you onward. We are now able to adapt ourselves to our circumstances. We have become acquainted with the honey-producing sources, and the time of year to expect them. We have become self-sustaining. We rear our own queens—the best in the world. All the bee-fixtures are manufactured at

our doors, without the cost of transportation. How different the condition to that of those of us who commenced bee-keeping away back in the thirties, when we had to wade our way through ignorance and superstition; when everybody believed there was a "king" bee which governed the colony with absolute despotism, giving his commands, requiring every worker to do its duty, whether of laying eggs or gathering honey; when it was generally believed that if you did not ring the bells and beat the pans the bees would not settle, but make a bee-line for the woods.

With a clear knowledge of the habits of the bee, with improved hives, with comb foundation, with the extractor, the smoker, and the hundred other useful inventions, with books on every department of bee-culture, we bid you go forward with love for your chosen pursuit, which, after all, is the only sure ground-work of success.

W. K. MARSHALL.

(To be continued.)



ANSWERED BY

DR. C. C. MILLER,
MARENGO, ILL.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 20 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—Ed.

Making Comb Foundation.

Can any man, gifted with ordinary intelligence, turn out his own comb foundation, if he has a mill? Or does it want a lot of experience? What is the cost of a mill? Must a smelter and dipper necessarily accompany it? If so, what does that cost?

Do apiarists, running say 100 colonies or so, make their own foundation, as a rule, or do they prefer buying it of dealers?

X. Y. Z.

ANSWER.—Years ago, when comb foundation was more or less a new thing, it was supposed that nearly every one should make his own. There were a great many

manufacturers who commenced to advertise and sell it, but although there is much more foundation used now, I don't think there are half as many manufacturers. The fact is, the little manufacturers found they could do better to buy from the larger ones. Running a foundation mill is a trade of itself, and takes no little skill and experience.

I never made any foundation, but I've seen a good deal of it made at three different places, and I've no desire to own a mill. I think, as a rule, that bee-keepers with 100 colonies and more, buy instead of making.

In Europe I think more bee-keepers make their own foundation, as there are more than 6,000 of the Rietsche presses in use; but I think it requires much less skill to run one of these presses than to run a foundation mill.

A 6-inch mill costs \$15.00; a 10-inch one, \$20.00; and a dipping tank, \$2.00. Dipping-boards cost 4 cents per inch in width.

Transferring and Moving Bees.

I have two colonies of bees in box-hives, that I wish to transfer into movable-comb hives, and about 10 feet into a new location in a house. If I drive them up into a box, then dump them down in front of the new stand, and drive them in, of course, during a honey-flow, will they stay there, or go back to the old location? R. R.

Ogden, Utah.

ANSWER.—You may count on their going back to the old location the first time they fly out and come back from the fields, at least most of them. But if those two colonies are the only ones within a few rods, I think they will finally find the right place and accept it as their home.

Bees Dying Out—Queens, Etc.

1. My neighbor has a great many bees in old-fashioned gums. They commenced swarming a few weeks ago, and are now dying out, leaving no comb at all. What is the matter with them?

2. Can bees rear queens at all times of the year? If not, at what times?

3. Can bees make a queen out of any egg in the hive?

4. If a queen gets away while handling her, and flies away, will she return, or not?

5. How long will a queen live, and do good work?

6. How late in the year can bees be transferred from old-fashioned hives into frame hives, and be safe? J. T. S.

Holloway, La.

ANSWERS.—1. I don't know. I'm not sure that I ever heard of such a case before. If I understand you, a swarm was hived in an empty hive, built no comb, and staid there till it died. If they were poisoned they might do so, otherwise I should expect them to build at least a little comb if there was a drop of honey to be had.

2. As a rule they don't make very good work at rearing queens except when honey is coming in.

3. No, they sometimes try it, but never succeed in making a queen out of what should under ordinary circumstances turn out a drone. But there is no difference between the egg from which a queen is reared and one from which a worker is reared. If there are no queen-cells in a hive, and you take away the queen, the bees will rear a queen from an egg, or a larva that would have turned out a worker if you had not taken away the queen.

4. It is said they will, and perhaps they generally do, but I've lost two or three queens in that way.

5. I have read of queens 6 years old. Ordinarily they would give up the ghost long before that, and some think best not to have queens more than 2 years old. If bees are left to themselves, they will probably not allow queens to continue more than 3 or 4 years, generally. But something depends on the work a queen does. If kept in a nucleus so as to lay very little, she may live much longer than if she lays profusely.

6. It is generally done early in the season, but can be safely done any time before the harvest closes, providing you are skillful enough to transfer full combs of honey without making a mess of it.

What Caused the Queenless Colonies.

About the first of February I found a very fine colony of bees queenless. I removed from it a few pounds of honey and doubled the colony with another colony in good condition, and in about ten days I found the last-named colony queenless. Still later I used one of the heaviest frames of honey, taken from the first colony, to feed another colony, and in a few days the queen of that colony "turned up missing." This last colony was strong in bees and brood, and had sufficient stores. What was the matter? I fix it up that the honey was poisonous, but if so, why did it affect the queens and not the bees?

TENNESSEE.

ANSWER.—I can hardly believe a queen would be killed by poisonous food and not the bees. I should expect the queen to be the last affected, rather than the first. I really can give no reason but that it just happened so; but it almost looks as if there must have been some special reason.

They Are Hybrid Bees.

In the afternoon of April 15th a swarm of straggling bees came to my bee-yard, and attempted and did enter my bee-hives. My bees are all blacks, and there is no other kind within 15 miles of me, that I know of. My bees went to work on these stray bees and killed them off, and when I came to notice it, each one of these stray bees had a yellow band around the forepart of their back body—just one band—and covering

perhaps a fourth or fifth of the body. The question is, what kind of bees are they? They seemed to be quite small, and a third smaller than my black bees. Where had they come from? I S.

Long, W. Va.

ANSWER.—They were what are commonly called "hybrid" bees, having Italian blood in them. The probability is that when alive they were as large as your bees, but a bee that is stung to death seems to shrivel up, and looks much smaller than when alive.

Of course, I can't tell where they came from, except that they came from some place 15 miles away, if there are none but black bees within 15 miles of you. But there may be hybrids much nearer than that, and it is possible that even the owner may not have noticed that they were anything but blacks.

The Music of the Bees.

Written for the American Bee Journal

BY DAVID HALL.

The gentle spring has returned again,
With its soft and balmy air.
With its genial showers, and sweet wild-
flowers
So delicately fair;

And we love to inhale their sweet perfume,
As we roam through the wildwoods free,
While our hearts are stirred by the songs
that are heard
In the wild birds minstrelsy.

After the long winter months have passed,
The bees on some pleasant day
Are brought from the room, where in silent
gloom,
They have passed the winter away.

And then what a rollicking time—do you
see?
As they circle in curves and rings,
The beautiful scene, in the silvery sheen
Of their delicate gossamer wings?

The air is replete with insect life,
Joyous and buoyant and gay,
As distant sounds from the school-house
grounds,
Where children are out at play.

And we often sit on the shady porch,
When the noonday meal is o'er,
And list to the hum of the bees, as they
come
Swiftly home with their golden store.

'Tis then we all hope the time's near at
hand,
For flowers with nectar distilled,
And with combs white as snow, above and
below,
That soon will be thoroughly filled.
Warsaw, N. Y., April 10.



No. 71.—Charles Nash Abbott.

In a recent issue of the BEE JOURNAL we noticed the death of Mr. C. N. Abbott, the founder and late editor of the *British Bee Journal*, which is now so ably edited by Mr. Thos. Wm. Cowan, and who in this English journal for March 15th, wrote a long and interesting biographical sketch of Mr. Abbott, from which we extract the following paragraphs:

Charles Nash Abbott was born at Hanwell, Middlesex, on Oct. 5, 1830. His father was a builder in a large way of business, and a man of high repute and sterling worth.

Early in life, while still a lad, an errant swarm of bees found its way into his father's garden, which, having been hived in a flat-topped skep, having a small window at the back, was a continual source of wonder and delight to the lad. On his return to school his thoughts often reverted to his own colony, which, in the ensuing holidays, swarmed and increased into three. These were the dark days of bee-keeping, and the "taking up" of one of these hives in autumn was always a dreary remembrance. The day of light, the existence of the *British Bee Journal*, was then far distant.

Many years passed before Mr. Abbott had the opportunity of renewing his acquaintance with bees, but in 1865 his father died, and this event relieved him from business necessities and permitted him to return to the dream of his youth.

Mr. Abbott having learned "the more excellent way" of bee-keeping, was eager to communicate his new-found knowledge to others not so happily circumstanced. The local newspaper, the *Middlesex County Times*, opened its columns to his pen, and he thus became a ready source of information to all who sought it.

In 1870, Mr. Abbott having pur-

chased the apicultural assets of a Dr. Coster, a noted bee-keeper who had died, he became a bee-master on a more extensive scale than formerly, and thoughts and aspirations arose in his mind as to whether bee-keeping might not be an industry of national attention. With this idea in view he became a writer in the *English Mechanic*, advocating most warmly the frame-hive system. It was as a writer to this paper that we first became acquainted with Mr. Abbott by name, and gladly welcomed his determination at a later period to provide a special organ for bee-keepers, by the establishment of the *British Bee Journal*.

There was no special paper devoted to the science of bee-keeping in this country, though a limited correspondence on the subject appeared in some of the gardening papers. There was, however, no leader of the "party of progress," and Mr. Abbott, in 1878, determined to initiate a journal which would give itself wholly to this object. As soon as he made known his object all those desiring progress rallied round him, and the realization of his project was made certain in 1873.

With the establishment of the *Journal*, bee-keeping received a new impetus and fresh developments. One of these was the establishment of the British Bee-Keepers' Association in 1874, in a great degree due to the strenuous advocacy of Mr. Abbott in the *Journal*. This led to the exhibition of manipulations with live bees, the idea originating with Mr. Abbott. The first exhibition which ever took place in England at which the operations and the mysteries of management of bees were explained was organized by the British Bee-Keepers' Association, and took place at the Crystal Palace in 1874. At this exhibition Mr. Abbott was the chief operator, and took the foremost place, delighting and astonishing the vast multitudes who attended to witness the operations, and it was at this show that we became personally acquainted with him, having previously only corresponded.

Mr. Abbott continued to conduct the *British Bee Journal* for a period of nine years, until December, 1882, when he vacated the editorship and proprietorship in favor of the Rev. Herbert R. Peel.

There is many a bee-keeper still who owes his knowledge of bees to Mr. Abbott's instruction, and who will recollect with what courtesy and patience every question was answered by him. Straightforward in character, he detested any-

thing that was underhanded, preferred to call a spade a spade, and did not hesitate to expose imposition and deceit. With a generous temperament such as his, it is no wonder that he had very many friends. During the whole time that we knew him, although we frequently differed in opinion, we always experienced from him the greatest courtesy.

We must not forget the indebtedness of bee-keepers to Mr. Abbott for his varied improvements in hives and appliances during the time he was editor of the *Bee Journal*; these form a history in themselves, and amongst these inventions the most ingenious and conspicuous



MR. C. N. ABBOTT.

ous are his Little Wonder extractor and his Combination hive, both of which are largely used.

Since the *British Bee Journal* was started many prominent bee-keepers have passed away, but none whose names will be so closely connected with the progress of the industry in this country as that of Mr. Abbott.

We feel to have personally lost a friend, and we are sure that we express the feelings of thousands of bee-keepers in offering our heartfelt sympathy with the family in their bereavement.

A Binder for holding a year's numbers of the *BEE JOURNAL* we mail for only 50 cents; or clubbed with the *JOURNAL* for \$1.40.



Eight or 10 Frames for Most Honey.

Query 922.—1. Taking a series of years which will yield the most comb honey, a colony on 8 Langstroth frames, or on 10?

2. Which the most extracted?—Bee-Keeper.

1. Eight frames.—J. A. GREEN.

1. On 8. 2. On 10.—G. M. DOOLITTLE.

1 and 2. I never tried it.—MRS. JENNY ATCHLEY.

1. In my locality, 10. 2. The same.—J. M. HAMBAUGH.

1. The one with 10 frames. 2. The 10-frame colony.—S. I. FREEBORN.

1 and 2. My opinion is the larger is the better in both cases.—JAS. A. STONE.

1 and 2. The 10-frame hive. A hive with 9 frames I prefer.—J. P. H. BROWN.

1 and 2. Eight frames for comb honey and 10 for extracted, should be the rule.—W. M. BARNUM.

1. The most comb honey where 8 frames are used. 2. I've no experience.—MRS. L. HARRISON.

1. I prefer the 8. 2. It makes no difference, if they are given room enough.—A. J. COOK.

1 and 2. So many other things enter into the case that nobody can tell. At least I cannot.—M. MAHIN.

1. In my locality, 8 frames, every time. 2. For extracted, I want to use 16 or more.—H. D. CUTTING.

1. Just what I'd give something to know. 2. I don't know, but I think most agree on the 10.—C. C. MILLER.

1 and 2. Nothing but a careful trial for "a series of years" would determine that point, in either case.—C. H. DIBERN.

1 and 2. We now use neither the 8 nor the 10, but a larger hive still. A 10-frame hive, is too small for us.—DADANT & SON.

1 and 2. My experience has been in favor of the 10-frame hive (probably on account of locality) for both comb and extracted.—J. H. LARRABEE.

1 and 2. That depends upon who has them; as so much more depends upon the management than the number of frames.—MRS. J. N. HEATER.

1. With myself, a 10-frame. It is a mooted question, however, and opinions vary considerably. 2. I prefer the 10-frame in all cases.—J. E. POND.

1. This depends largely upon the honey-flow and the care. In the hands of most bee-keepers probably the 8-frame would come out ahead. 2. The 10-frame.—P. H. ELWOOD.

1 and 2. That depends entirely on how they are manipulated. An 8-frame brood-chamber is as large as I want, but I desire plenty of room above for either comb or extracted honey.—EMERSON T. ABBOTT.

1 and 2. In my locality, the larger hive gives the best results. No doubt climate, and even locality, will make a difference, and perhaps, accounts for the difference in opinion on this subject.—G. W. DEMAREE.

1. Localities and methods differ so much that I think it would be difficult to lay down a rule for the guidance of beginners. I use an 8-frame hive, but I am not sure it would be best for everybody.—EUGENE SECOR.

1. If 8 frames are as many as the queen will occupy, the colony will furnish more surplus comb honey with an 8 than with a 10-frame hive. 2. It would not make very much difference with extracted honey.—A. B. MASON.

1. The colony on 8 Langstroth frames; but a colony on 8 Nonpareil brood-frames will yield more comb honey than either, with proper management. 2. Of course more extracted honey could be obtained from the larger hive.—G. L. TINKER.

1. Ten-frame. 2. We use an 8-frame Langstroth hive, 3 stories high. One set of 8 or 10 frames is not enough for extracting. The queen wants 10 frames for brood. Besides the lower or brood-combs, I want about 20 frames for store combs.—E. FRANCE.

1. The hive that as a rule the colony will have about full of brood 30 days before the end of the honey season, is the best for comb honey. The question is to some extent a matter to be determined by latitude and the length and time of the honey-flow. In my latitude 8 Langstroth frames are enough, and all over that would doubly reduce the surplus, but in Missouri 10 Langstroth frames might be better. 2. Ditto.—R. L. TAYLOR.



A Reply to Rev. Wm. F. Clarke.

Written for the American Bee Journal
BY DR. C. C. MILLER.

I want in the outset to assure you that I had not the slightest dream of discourtesy in speaking of you as "Rev. Clarke." It so happened that immediately after reading your letter I met a clergyman who is pastor of a city church. I said to him, "I want to ask you a question. If I should call you 'Rev. Hill,' would it be correct or not? courteous or not?" He looked at me with a puzzled expression, and as I remained silent he said, "Why, what do you mean?" I said, "I mean just what I say." He then said laughingly, "That's a very common way of speaking in our community, and is never understood to mean any disrespect."

In the *Marengo News* I find, "Rev. Bartlett received a telegram.....;" also, "Rev. Lamb preached.....," and I'm sure the editor meant nothing but respect.

Just why it should be any more respectful to add the initials of your name I do not understand. I should not have considered that you were treating me with any greater courtesy if you had interpolated the "C. C." between the two parts of the name you used in speaking of me. But custom rules in such things, and if I committed what you consider a breach of good manners, I can only say I am sorry for my ignorance and will try not to offend again. Far be it from me to use in any but a respectful manner a title indicating an ambassador of the Christ whom I am trying to serve.

Speaking of courtesy, I might inquire whether it is altogether courteous on your part in a letter professedly addressed to me for you to call me up, and then before you are one-fourth through, to turn from me to someone else, leaving me uncertain whether I am at liberty to sit down, or whether you have anything more to say to me. Or were

you following the German custom of addressing inferiors in the third person?

I think you would see less "chuckle" and "gloat" in what I have said, if you knew just how I felt about your theorizing. In a certain sense you stand before the world as a representative American bee-keeper. Twice elected to the highest office in the gift of American bee-keepers, editor at one time of the first bee-journal on the continent, recipient of a prize for a bee-poem, author of a work on bee-keeping—whatever you say has a weight that it would not otherwise have, and if you make utterances that may in the least degree excite ridicule, it more or less touches the bee-keepers of two nations.

The theory as to bees injecting poison into honey by the sting, I think you are not solely responsible for, but I believe you are alone responsible for the sting-trowel theory. After you had made the positive statement that the sting is really a trowel with which the bee seals the cell, I was anxious that you should either withdraw the positive assertion, or give some proof for the alleged fact. I wrote you privately to that effect, with I am sure no other feeling but care for the truth and your reputation as an individual and as a representative man. Your reply was kindly, but you gave no proof, publicly or privately. I afterward appealed to you publicly, but met with no greater success. After your paying no attention to repeated calls, it seemed to me I felt justified in asking you to say that you had no proof. And when you say that you feel "insulted and indignant," I must say I think it is without just cause.

You talk about rack and torture. Tut, tut. Who thinks of such a thing? Why, bless you, I wouldn't hurt a hair of your head. But I cannot agree with you that you would be telling a lie if you should comply with my demand, as you are pleased to term it. You have stated a thing as positively true, and there is no evidence that you know it is true. You have given some reasons why you thought it might be true, and I think you have gone no farther. But that is a very different thing from giving proof of its truth.

You say, "I will gratefully accept correction of any opinion of mine that can be shown to be an error." Now do you really think that, fits the case? While it might be shown that you are in error, is it not the reasonable and straight thing for you to offer proof of what you assert as a fact? You have never said that you saw the bees using

their stings as trowels. Not even that you ever saw them touch the comb with their stings. I do not demand it as an inquisitorial officer, but as a brother bee-keeper I ask what proof you have, or whether you have any proof. If the bees do as you say, it ought not to be difficult to furnish the proof. Bees by the hundred can be seen at work on the combs, and thousands of cells are sealed. Surely if every capping is operated on as you say, you ought to be able to see one solitary instance. I ask in all kindness, have you any basis for your statement, except your own suppositions?

Marengo, Ill.

Cotton-Seed for Winter Packing.

Written for the American Bee Journal

BY W. H. FRIDGEN.

While there is no little said about packing bees for winter, and the best material to use for the purpose, I have never seen cotton-seed recommended. Is it because bees do not need much, if any, protection where cotton is grown, except a good, tight hive? or has cotton-seed been tried and found worthless, or not as good as chaff and other things in general use?

The farmers here keep their sweet potatoes in sheds, or open out-houses, by covering them with cotton-seed two or three inches deep, and they are considered safe, if piled on a dry dirt floor, in zero weather, with from three to four inches of seed over them; and as the weather gets warmer, the seed has to be removed at the top of the pile to allow the heat to escape. Cotton-seed is hard to wet, and a pile of it will not get wet more than an inch or two deep in a hard rain, or by being out in a rain all day; but if it once gets wet, it will heat, or if piled on the ground, and otherwise protected, the result will be the same, which might injure it some for packing, and especially as it gives the seed an unpleasant odor. But where it is kept dry it will keep almost indefinitely, and I believe it would be the best packing that bee-keepers of the North could use, as two inches of it will keep the bees warmer than a foot of chaff.

Cotton-seed measures $3\frac{1}{2}$ bushels to the 100 pounds, and can be bought for 15 cents per bushel, generally, except near the oil-mills.

Before I ever saw a movable-frame hive, I used to pack my bees in cotton-seed for winter protection, by placing

two hives in a meat-box after cutting a place at the bottom for the entrances, and packing the seed around and over them, and protecting the whole with a cover, and they did well. Now I put board covers over the frames, giving $\frac{1}{4}$ inch space between them and the top-bars, and put three inches of seed over the boards in the second bodies, and the bees do well here without any other protection. In these boards I cut holes two inches square, over which I tack wire cloth, and put feeders on when I want them, and pack the seed around them. A thermometer buried in the seed over a strong colony will register 50° when the weather is real cold.

If no one in the North has ever given cotton-seed a trial as packing material for bees in winter, I would like some practical bee-keeper to do so. I will send Dr. Miller the seed, if he will try one or two colonies next winter. By placing a box with a tight bottom flat on a raised place of ground, so as to get the benefit of the warmth of the ground at the bottom, and still prevent the moisture from rising, and pack two inches of seed under and all round a hive, in this box, leaving the entrance so that it can be left wide open if desired, and three or four inches on top, covering the whole, so as to protect it from snow and rain—in this way I believe a strong colony will winter well anywhere in the United States. Possibly this may be absurd, and if so let any one say so.

On March 23rd the weather was so warm that my bees were clustered on the front of some of the hives, and drones were flying; to-day (March 26th) it snowed until one o'clock, with a cold wind to follow, but fortunately my bees are still protected by the warm cotton seed.

Creek, N. C.

A Look Over the "Old Reliable."

Written for the American Bee Journal

BY G. W. DEMAREE.

That issue of the AMERICAN BEE JOURNAL of April 12th, strikes me as being more than usually interesting. Of course the "Old Reliable" always contains good reading, but one issue of any first-class paper is likely to be more interesting than another.

That glucose honey (?) business quoted on page 456, does not surprise me. The wonder to me is that our watchmen on

the apiarian tower have failed to break silence so long. I have a sample in my possession of that selfsame glucosed honey. No chemical test is necessary to discover its ear-marks. They are glucose.

When the sample was first sent to me, and had undergone a close examination, it began to throw much light on some mysterious things I had read in the bee-papers some years ago about "short cuts" in the science of honey (?) production. Let us have the "light turned on." Some of us want to continue to offer "bees' honey" for sale, and we can't compete with a glucose factory!

THERE IS A PATENT ON IT.

If the indispensable Mrs. Atchley would consent to drop the monotonous familiarism of "Friend Tom," and "Friend Dick," etc., when addressing querists, and substitute for it plain "Mr. Tom," some of us would like to read her "corner" much better than we do, if that is possible. There is not more than one man, or may be one woman, in this vast country of ours, who can indulge in such *palaver* as that constantly, without making people tired. *There is a patent on it*, anyhow, that ought not to be infringed upon.

Mrs. A. is a "Sunny South" sister, and she will know how to appreciate a friendly criticism.

TRANSFERRING ROYAL LARVÆ.

Dr. Tinker thinks that he is one of the first, *if not the first*, to transfer larvæ from a worker cell to a royal cell. I do not have time now to go through old files to hunt up historic facts, but I remember that a Mr. Davis first wrote of transferring larvæ, and I practiced it soon afterward, and that was many years ago.

BEE-PARALYSIS.

When this bee-trouble is properly understood, it will be talked less about. I discovered in 1883 that *soporose* nectar is the true cause of the affliction. The symptoms are, if closely watched, first, stupor or sleep, from which state some recover, but the greater number lapse into convulsion and death. The last stage of the struggle is very much like the effects of the sting of another bee. The symptoms are never present during a brisk honey-flow, because there is no *deranged* secretion of nectar at such times.

Copious feeding of thin syrup, or rather, sweetened water—a little salt

added, no doubt, is good—is a sure remedy, if the attention of the bees can be attracted to the feed.

TIRING OUT SWARMS.

Alas! in a good honey season the swarms were sure to *tire me out* before I learned to raise the brood from the lower story of the hive to the super above, with a queen-excluder between, thus compelling the queen to start anew below the excluder. I now can *tire swarming entirely out* of my bees.

SAM WILSON'S PREDICTIONS.

There is no "hoodooism" in Bro. Sam's prophesying. He simply waits to see when the rainfall occurs, and draws his conclusions. In a *general way* I have relied on these "signs" for 10 or 12 years, and they never fail unless crooked weather strikes at the wrong time. A wet season should be succeeded by a good honey year, and *vice versa*.

DARWIN ON BEES.

I always smile when reading the learned works of *scientists*, when they alight upon the subject of bees. It hauls down the curtain, gives me a peep into the soundings of their mighty achievements in science, and helps me to put a proper estimate upon their assumptions, generally.

SCIENCE OF MATING QUEENS.

Has the *modus operandi* been discovered? Let the spring of 1894 be the beginning of the *new era* in the breeding science. "Hand around" the "hat!" We have something already "made," and ready to "drop in," when it comes around this way. I have spent too many years in search of this hidden treasure to fail to appreciate its discovery (?).

THE WEATHER—ITS EFFECTS.

The month of March, up to the 24th day, gave us as fine weather as one could wish to see in May. The result was, vegetation was teaming and throbbing with life, and our bees were working in full strength—when the cold wave of the 24th sent the temperature down 16° below the freezing-point. No green thing could survive this unscathed. The oats crop was killed outright, wheat badly injured, tobacco plants and young clover wiped out, and the entire fruit crop, with the hopes and joys it brings, are no more. It is over two weeks now, since then, and vegetation has tried

hard to rally, but the fields are yet unable to "look gay." Our bees begin to gather pollen again.

Christiansburg, Ky., April 14.

The Best Queens for the North.

Written for the American Bee Journal

BY H. G. ACKLIN.

On page 231, Mr. J. P. West says something about the best queens for bee-keepers here in the Northwest. My experience in buying Southern-bred queens has not been what I should like, for it is a well known fact that we cannot rear queens as early as we would like, and if queens are needed before the first of June we are obliged to send South for them, unless we can have two or more queens reared and wintered in one colony by using bee-tight division-boards to cut off communication in the brood-chamber (and if a surplus chamber is needed, use perforated zinc between the brood and surplus chamber), making an extra entrance on either side, or rear, to correspond with the number of apartments desired. The coming season I want to experiment some by trying to rear and winter two or more queens in one colony.

I have bought queens from several different queen-breeders that are south of the 40th parallel, and as many as 28 at one time. Very few proved to be good, and most of them worthless so far as wintering is concerned. After introducing, they would do well until the approach of cold weather; then the following spring, if the colony lived that long, most of them would "turn up missing," and only about two per cent. survive June 15th.

The best dollar-and-cent queens that we can get hold of are some that we bred from a daughter of an imported mother, using care to combine all good qualities possible in selecting the mother-bee to breed from, and trapping undesirable drones. We have two colonies, 4 and 3 years old, respectively, that have wintered well every winter; they do not show any signs of bee-diarrhea, and always come out of winter-quarters good and strong; are gentle and nicely marked 3-banded Italians, and always gather a good crop of honey. We have a number of queens bred from the above two colonies, and also from other good queens reared here in the Northwest by neighbor bee-keepers, that prove to be good.

We have tried the 5-banded bees, that we very much admire, but that have resulted in winter loss every time. The only colony we lost the past winter was one with a 5-banded mother that we bought last summer.

Now, my good friends, this is not intended as an advertisement, for at the present price of honey we have never been able to rear queens to sell, and make as much money as we can by running our colonies for honey; neither is this intended to injure the queen-breeders of the South, who no doubt use the very best possible care in breeding the very best queens for bee-keepers, where the winters are not so long and severe as they are here.

If any bee-keeper here in the Northwest has had a different experience with Southern-bred queens, let him speak out. If not, why not every bee-keeper rear his own queens, selecting a good queen to breed from, and we can soon make up for the heavy winter loss of 1891-92 and 1892-93.

This thing of breeding queens especially for our cold climate has proven a success with me and neighbor bee-keepers for the past 8 years, and I feel sure it will with others, if they give it a fair trial.

We have queens that were bred from an imported mother last summer, that give satisfaction so far. Last year was the first we used an imported mother.

We put our bees out on March 17th for a flight, and on the 25th the mercury was at zero, and we returned them to the cellar. Since then they are reduced some in the number of bees. Reports now coming in show success in wintering.

Ramsey Co., Minnesota, April 18th,

Honey Exhibits at the Midwinter Fair.

Written for the American Bee Journal

BY W. A. PRYAL.

In my last letter I spoke in a general way of what was to be seen at the Midwinter Fair in San Francisco in the way of honey and beeswax. A day or two ago I was to the Fair again, and at my leisure sought out the several places where honey was displayed. In my first letter I particularly referred to the general display in the gallery of the Horticultural Building. I visited this exhibition again and noted the names of the exhibitors, and the quantity and quality of the honey there shown.

I hardly know whose honey to mention first, some one might feel slighted because I did not mention his display first. I think the way I can get out of the charge of showing partiality in singling out one man over another for first place, is to give the name of the honey oldest in age first mention. And in doing this I will be honoring the ancient honey while at the same time praising that of more recent years, for we have often heard it said, especially by nice young ladies, that age should have precedence before beauty.

Therefore, the exhibit of J. Archer, of New Jerusalem, Ventura county, must be looked at first. Some of this exhibit did duty at the Columbian Exposition at Chicago last year. So you see that it is somewhat of a veteran exhibit, and the honey is not new by any means. There is the same hive with its store of honey, *a la mode apis mellifica*. And the honey in the pumpkin shell! that should not be forgotten, though it is not a very interesting sight to behold. I notice that the bees that were enclosed in the case holding this "natural" bee-hive, were as industriously struggling to get out of their place of confinement as was the Industrial Army when it was making some of its movements recently under forced difficulties. I pitied these poor black bees, and felt disposed to let them out and enjoy the freedom of the great Horticultural Hall. I feared, though, that the visitors in the place would not thank me for the humane kindness I displayed toward the incarcerated little insects.

While wondering why these bees were thus pent up, my vision fell upon a scrap of brown paper upon the floor, and I picked the paper up, as there seemed to be some writing upon it. These were the lines that I read, and I felt like saying "Amen" to them:

"How doth the busy bee
Improve each shining hour,
Thumping its little head
Against this glassy bower?"

"If 'twere in my power,
I should set you free,
That you might soar about
The great big fair to see."

Mr. Archer's comb honey was for the most part pretty fair, still it was not as nice as it might be for exhibition purposes. I think that some of it was bean-honey, though there was nothing to so designate it. I have heard that his bean-honey is something fine.

Mr. J. F. McIntyre, of Fillmore, in the same county, has several jars of nice looking honey here, but as it was in

rather large-sized jars, it did not show off to that advantage that it otherwise should. Mr. A. G. Edmondson, of Ventura, has some amber-colored honey that appears well, but it, too, was not in as presentable appearance as it might be. I have no doubt but much of the extracted honey throughout the buildings would have looked one hundred per cent. better if it had been placed in the right sort of exhibition jars. Mr. Edmondson has a bee-brush made of the fiber of the well-known California "soap-root" that equals anything of the kind I ever saw. The only fault I noticed about it is that it is rather too heavy. Perhaps this is owing to the way it was made, instead of any defect in the fiber.

The finest lot of honey in this general honey exhibit is that shown by M. H. Mendleson, also of Ventura. It is worthy of remark that all the bee-keepers making a display in this department are Ventura county apiarists. Mr. M. has honey in the comb and extracted honey in various sized bottles and jars. As he has used a number of exhibition bottles—tall thin bottles such as oil is shown in in an oil-store—his beautiful sage and bean honey shows off admirably. It is almost as clear as water. In truth it is the finest honey I ever saw. The credit of getting this honey in such nice shape is due to Mr. Mendleson and his agent in San Francisco, Mr. Pallias.

Leaving the honey "section," and not far away in the same gallery, in the Kern county exhibit, I found some honey that appeared white and nice, but it was set up by some one who knew nothing of how such things should be attended to. Some of the sections were set on the wrong edge, consequently some of the honey commenced to ooze through the cappings. The name of this exhibitor was not given—a neglect that I noticed was apparent in nearly all the county exhibits of honey.

There are several very creditable lots of comb honey in the San Bernardino county exhibit. Those of Mr. J. C. Hall, of Redlands, and Mrs. M. M. Fisher, of Beaumont, were the most notable. The comb was white and clear, and well filled out.

I was disappointed in not finding considerable honey in the Los Angeles section; there were some jars of various amber-colored honeys that looked attractive.

The honey from San Diego was mixed up among the jellies in that county's exhibit. This was done to give greater artistic effect to the display; that the

"artist" succeeded in accomplishing his or her object, goes without saying, still, I should have been better pleased to have seen several hundred pretty jars of San Diego sage honey, as well as a ton or two of white comb honey, to all the artistic effects that might have been attempted.

The largest display of honey, beeswax and implements used in the apianry made at the Fair is that of L. E. Mercer, of Ventura. This is the great honey exhibitor and prize-taker at the county or district fairs in the Golden State. From long experience Mr. Mercer has come to know how to get up an attractive show. His display in the Ventura county section of the Southern California building is worthy of separate notice, and in order to do it justice I shall leave it until my next letter—in fact, the notice of this display will wind up all the exhibits of honey or other apianry exhibits at the Midwinter Exposition that I have been able to find.

North Temescal, Calif.

Pure Italians—California vs. Florida.

Written for the American Bee Journal

BY DR. E. GALLUP.

Now, Mr. Stinger, do you pretend to say that if your light-skinned, light-haired, light blue-eyed German marries with a dark-skinned, dark-haired and dark-eyed Italian, the offspring will be pure Italian? The cross may be a good one, but don't palm them off as pure Italians on the unsuspecting. There is where the objection comes in, with me.

Now in reply to Dr. Oren, of Daytona, Fla. (see page 282.) W. A. Pryal gave him a good send off, but let me hit him a little. We can pick ripe fruit from the tree or vine here at any season in the entire year. It is a well known fact that lemons are in bloom, the fruit is setting, growing and ripening at all times. In picking it has to be gathered from three to four times in the year. The fruit is picked green as soon as it attains a suitable size. They have to be matured and cured off the tree. Another fact: A lemon that is allowed to ripen on the tree is entirely worthless in the market. It took our lemon raisers a long time to ascertain this fact, but now our lemons will stand the test alongside of any from any part of the globe.

This State raises oranges, and first-class ones, almost to its northern limit, and they ripen in the north part of the

State within a month as early as they do in Florida. Here we have an early, and late ripening varieties, so we can pick from the tree at nearly all seasons of the year. Still, our season for shipping is from February until June. I have picked as fine eating oranges as I ever tasted, in August and September.

So are our winters warm and pleasant, and our summers are as much more pleasant than yours, as you can imagine. You, or the most of Eastern people that do not know, associate our winters with the rainy season in Oregon or Washington, which is a grand mistake. Our bee-keepers' firewood only costs the labor of cutting right at their doors, as it were, and live-oak at that. Here in the valley we raise our firewood from the seed in four years, and once planting lasts for all time, for when we cut it off it shoots right up from the stump again. If I should tell you what a tremendous growth an Australian gum-tree makes under favorable circumstances, you would and could not believe me, and it makes splendid firewood.

No irrigation is needed here, either, to raise one crop in ordinary seasons, but where we raise three to six crops on the same land in a year, we irrigate. Still we have thousands of acres in this county that needs no irrigation whatever.

We also have thousands of artesian wells costing all the way from \$20 up into the thousands, with the purest kind of water. Myself and son-in-law bought 40 acres of as good land as ever lay outdoors, on which we could raise one crop of corn, grain, potatoes, or almost any crop, without irrigation. But we had an artesian well that furnished water to irrigate 100 acres for the second, third, and fourth crops, or six crops of lucerne, and two months of pasture every year.

When it comes to the immense varieties and quality of our fruits and productions, Florida certainly must take a back seat, and Eastern people are fast finding out that it pays them to take the long journey instead of the short one, when they see or seek climate, scenery, etc. I have seen hundreds of people who have been in Florida, and all without an exception give this State the preference.

On page 187 of the second volume of "The New Revelation" (published by T. J. Griffiths, Exchange Building, Utica, N. Y.), a second son called "Christ" is to be born, and God is to rear the child in California, as there is the most perfect air on the continent, and God designs to bring him forward soon, as He has

already chosen the parents of the child. The child will be born and reared in California. So much for the "New Revelation." Why, Doctor, you are "off your base" entirely about climate! You had not even looked up any authority whatever on the subject, and just think of your asking Gallup to "take off his hat" to your climate! Couldn't even think of such a thing, nohow you can fix it.

Santa Ana, Calif., April 19th.

Spring Management of Bees.

Read at an Iowa Co. Farmers' Institute

BY C. E. TEETSHORN.

On the approach of spring bee-keepers naturally feel desirous of getting their bees out of the cellar. I have many times experienced this desire, but I have learned to hold myself. I want the snow off the ground, mercury 50° in the shade, a still day, and the bees all out by 11 a.m.

Next examine as to the amount of stores remaining with each colony. All needy colonies should be supplied at once. Honey is the natural and best food; granulated sugar comes next.

I have fed a great deal by placing honey or sugar about the bees under the cap. If sugar is fed it should be melted, but not burned, putting enough water with it to make a syrup, and this syrup poured into frames of comb placed upon the top-bars of the brood-frames. I have frequently kept my bees from starvation in this way for six weeks before the flowers furnished a sufficient amount of nectar.

SWARMING OF BEES.

There is nothing in the whole realm of rural economy so pleasing to my eye as the swarming of bees.

Swarming, as a rule, in this part of the world, begins from the first to the 10th of June, and continues from four to six weeks. The greater number of swarms issue between 10 a.m. and 2 p.m., but they are liable to swarm at any time between 9 a.m. and 4 p.m., and, in exceptional cases, I have known them to swarm as early as 7 a.m. and as late as 5 p.m.

Bees should be hived within 15 minutes after they cluster, as, if left from $\frac{1}{2}$ to $\frac{3}{4}$ of an hour, they will take to their tree in the woods to return no more.

In hiving a swarm, a good and easy way, where the tree is of no particular value, is to cut off the limb holding the cluster, and shake the bees off before the hive, but, on the contrary, when I desire to avoid mutilating the tree I shake the bees into a basket and carry them to the hive.

Drenching bees with water during the process of hiving is a mistake, as it retards the natural operations of the swarm. As a rule, I avoid the use of water. Occasionally a refractory swarm must be deluged.

I have a sheet at hand to cover over the swarm I am hiving, in case another swarm issues, as they will almost invariably cluster together. In case two or more swarms cluster together, the work is not so easy.

Suppose three have united; I place three hives in a triangular shape, and shake the bees between the three. If the bees go too much to one hive, I move it a little farther away. I cage all the queens I can find. If I find all, I have the matter in a nutshell, but in case I do not find all the queens, I have to judge by the movements of the bees where the caged queens are needed.

All this requires experience. I generally make a success of this kind of a performance; while beginners find it difficult to see the queen, it is surprising how readily the eye of an experienced bee-keeper will discover her. I have never seen more than one queen with a primary or first swarm, but later on with after-swarms I have seen five queens.

When I deem it advisable to prevent further swarming, I cage the queen or queens, and in this way force the swarm to return to the present colony. If, in order to avoid brood in the surplus, it is desired to wait a few days after having a swarm before putting on a receptacle for surplus honey, be sure to prevent the bees going up into the cap by means of a cloth or board placed over the brood department, remembering that it is the nature of bees to begin at the topmost point and work down. Do not delay putting on the receptacle for surplus more than a week, especially if a good white clover flow should set in, as the brood department is sometimes quickly filled.

While I would not advise the beginner to invest much in implements for the apiary, two things are absolutely indispensable—a bee-veil and a good smoker. I have never worn gloves, but I would not attempt to handle bees without a veil, as it is not advisable to take too

many stings about the head and neck. There is much in knowing how to handle bees to avoid stings, but any person who undertakes to handle them should bear in mind that stings are a part of the business.

KEEPING DOWN GRASS IN AN APIARY.

At the beginning of the swarming season the bee-keeper will realize that the grass is growing rapidly and becoming a great hindrance to all operations in the yard. How to get rid of grass in the bee-yard is a problem that has been much discussed from time to time in bee-periodicals. Every bee-keeper who has tried the scythe among bee-hives knows that he soon heard something besides the swish of the scythe. Some advocate the use of a lawn-mower. I have solved the problem by the introduction of a sheep into the bee-yard. My yard is about five rods square, and one sheep keeps the grass down in the flush of the season. If a larger yard is required put in two sheep. A sheep will eat early and late, and during the heat of the day retreat to the shady side of the yard away from the bees.

This early and late feeding when the dew is on, accounts for the fact that sheep will thrive in a dry season without water. A sheep will eat off the grass at the entrances of the hives if nowhere else. I can see two reasons for this—the grass becomes sweetened by the bees passing over it with the sweets they have gathered, and it also becomes richer and more tender by reason of the cleanings of the hive.

I have dwelt at some length upon this subject, for I feel that a sheep once in the bee-yard will not be discarded.

HARVESTING THE HONEY CROP.

Inexperienced bee-keepers dread the work of removing the surplus honey from the hive. When a large quantity of honey is produced, a complete honey-house is necessary. I take off honey at the break of day, and place the cases or boxes where the first rays of the morning sun will strike directly upon them. By the time I get my cows milked most of the bees have left the cases and returned to the home nest. Be careful not to wait until the bees get to coming from the hives, as there would be serious trouble. When the bees threaten to come from the hives, remove the cases to a shady place where the bees remaining may be removed without much difficulty.

In taking off the cases or boxes from

the hives, I light my smoker, pry up the case or box a little, blow a few puffs of smoke in the opening, and then remove the case without difficulty.

After much experience I have settled upon rotten wood as the best thing to use in the smoker. This can be found in old stumps by a little search. The wood must not be too much decayed—it should be firm enough to stand quite a pressure between the fingers. Honey should be stored in a warm, dry place, and never in the cellar.

Enormous yields of honey are sometimes realized, but it is well for the bee-keeper to remember that 50 pounds per colony is a fair yield.

The last three years have been crushing on the bee-keeping industry in most parts of the world. Were honey a necessary article of consumption, and no adulteration practiced, it would command 30 cents per pound to-day. Comb honey is more than twice the price of extracted, and simply because the consumer places reliance upon the comb as proof that it is floral honey.

But once some bee-masters virtually lent sanction to the practice of feeding sugar for the production of comb honey; all under the plea that sugar-honey is the same, chemically considered, as floral honey, and that the consumer, at any rate, will not know the difference. It is a matter of deep regret that such leading lights in the bee-world lent a helping hand in bringing a pure floral honey into disrepute. Right here I have to hold myself from drifting into politics, but remembering the heading of this essay, I will simply say that combination, misrepresentation, and adulteration are running rampant in the United States, and consumers must be on the alert, and arm themselves with sharp and well-directed javelins of law.

Cresco, Iowa.

A New Edition of "The Bee-Keepers' Guide; or Manual of the Apiary," by Prof. A. J. Cook, has just been issued by the publishers of the BEE JOURNAL. Sixteen thousand copies of this excellent and complete bee-work have already been sold, and it is to-day as standard as ever—Plain—Practical—Scientific. It contains over 450 pages, is beautifully printed, neatly and substantially bound in cloth, and is sent postpaid for \$1.25 per copy; or clubbed with the BEE JOURNAL for one year—both for \$1.65.

Farmer's New Guide—see page 579.

Some Mistakes Corrected.

We have received the following from General Manager Newman, as an explanation of the stand taken by the Bee-Keepers' Union in regard to the alleged adulteration of honey by Mr. Heddon:

Since the publication in *Gleanings* and the AMERICAN BEE JOURNAL of Mr. Heddon's reply about adulteration, some misunderstanding has resulted. As the misconception concerns myself and the National Bee-Keepers' Union (of which I am General Manager), I desired to put the matters in question in their proper light, as well as to correct some mistakes.

In the former matter Mr. Heddon's statement was as follows:

"When at the World's Fair last fall I called on Thomas G. Newman, Manager of the Bee-Keepers' Union. While there he showed me two bottles of honey said to be adulterated, and taken from one of my cans.....These two samples never came from my apiary, and I afterwards gained some evidence that they were sent to Manager Newman by W. D. Soper, of Jackson, Mich.," etc.

Some readers received the impression that I gave him the information—not noticing the words: "I afterwards gained some evidence that they were sent," etc.

As I have had no correspondence of any kind with Mr. Soper for several years, and received no honey (either pure or adulterated) from him at any time, I could not have given Mr. Heddon any such impression. I therefore wrote to him inquiring if he intended such an interpretation. He replied thus:

"No, sir. I haven't said a word about you in connection with Mr. Soper! Not a word! Read again what I did say in *Gleanings*," etc. "I received my impression that W. D. Soper sent you the samples from an anonymous letter from the eastern part of this State, mailed on a railroad train, and printed with red ink. I never could get the least idea who sent it."

This indisputably settles that matter, and I will pass to the next point. The AMERICAN BEE JOURNAL, on page 520, copied from the *Review* these words:

"Take the case of Mr. Heddon for instance. The Union did not consider that there was sufficient evidence to convict," etc.

The editor of the AMERICAN BEE JOURNAL commented on this statement thus:

"As to the Union not considering the evidence sufficient to convict, we may say that was when the Union had only Prof. Wiley's analysis a year or so ago. Since then we believe the Union has not taken cognizance of the evidence obtained in the last few months—the analysis of 'Willard's honey,' for instance. It would seem that the case is a great deal stronger now than it was a year ago."

With due deference, I must say that I cannot see wherein the case is stronger now than it was a year ago. Certainly the analysis of the "Willard honey" is no more reliable than that made by the United States Chemist, Prof. Wiley, who stands at the head of the profession! To show that it is in reality *weaker*, I have only to state that the same chemist analyzed the "Jankovsky honey" and pronounced it adulterated with sugar, when another equally good chemist made an analysis of the same honey, and pronounced it pure! This is but confusion worse confounded! To rely upon such evidence in court, to convict, would be extremely hazardous!

As General Manager of the Union I placed all the facts before the Advisory Board, asking for instructions how to proceed in the case and received replies from every member. Nearly every one cautioned me not to undertake to prosecute the case unless I felt reasonably sure that the evidence was sufficient to convict.

This correspondence was then submitted to the President, and his advice requested. Without betraying any confidence between the executive officers, I think I may say that the legal advice given by President Taylor was *sound*; I fully concurred in his recommendation, and carried it out. It is in my possession in writing (as well as the correspondence with the Advisory Board), and if necessary to defend the Union, consent can no doubt be obtained to publish it. As these are *private* consultations between executive officers, the communications must so remain unless permission is given for publicity. Until then the General Manager will shoulder all the blame which unwise enthusiasts may wish to load on the Union for non-action in the matter.

Since then no application has been made to the Union to prosecute Mr. Heddon—except that he has himself very strongly urged the Union to prosecute him in order to prove his innocence—a thing not contemplated by the Constitution, and one which would in all probability not be sanctioned by its members. At least, before such an innovation is

made, I think every member should have an opportunity to express his or her opinion by vote.

It matters not how sure some may feel that the evidence was sufficient, even though circumstantial. The law takes a cold view of the matter, and demands ABSOLUTE PROOF. It is not a question of guilt or innocence with the Union, but merely the sufficiency of the evidence to convict.

Had the accused, or his employees or confederates, been seen in the act of sophistication—had the adulterating material been found on his premises, or anywhere in his possession—had the product been obtained and sealed up on his premises, and remained intact until produced in court and submitted to experts—then it would have been different. But all these links in evidence were lacking!

The product relied upon for proof had been shipped unsealed, and it was possible that it might have been tampered with in transit, in the warehouse where stored, or on the way in its second shipment, etc. Unquestionably it was a "villainous compound."

As the accused, when shown the samples, positively stated after sampling them: "These samples never came from my apiary"—would not such a statement in court stand, in the absence of positive testimony to the contrary? Would not the Union have lost its case—squandered its money—injured its reputation, and damaged the industry if it had espoused such a weak case?

With positive proof in its possession, the Union would have prosecuted the case to the full end of the law, for no condemnation is too strong for a sophisticator of that God-given sweet—honey! No living being has any more right to adulterate than he has to counterfeit "the coin of the realm." All the Union needs is positive evidence to convict.

THOMAS G. NEWMAN,
Gen. Manager of B.-K.'s Union.

"Foul Brood: Its Natural History and Rational Treatment," is the title of an interesting booklet by Dr. Wm. R. Howard, of Texas. It also contains a review of the work of others on the same subject. It is being sold at the office of the BEE JOURNAL. Price, postpaid, 25 cents; or clubbed with the BEE JOURNAL for one year—both together for \$1.15. Orders received now.

Read our great offers on page 581.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Right, You Are!

The position taken by the BEE JOURNAL in regard to glucosing is exactly right. No man has any right to the benefits of the Bee-Keepers' Union who can so far forget decency as to advocate the practice. Any one who is a member of that organization, and is found guilty of either glucosing or sugar-honey selling, should be expelled from its membership. J. R. COMMON.

Angelica, N. Y.

The "Bee Journal" Helps Him Out.

FRIEND YORK:—The BEE JOURNAL for April 19th did not come to hand. Please send another copy, as I don't want to miss one number—they help me out so often with the bees. My wife thinks I am a "crank" with the bees, but I can't help it, I like the bees all the same. I have 5 colonies in Langstroth hives, and all have wintered well so far, on the summer stands.

GEO. H. WEED.

Lanark, Ills., April 23.

Outlook Not Bad—Father Langstroth.

I don't see many reports this spring from Iowa, but we are "in it" just the same. As far as I am able to learn, bees have wintered well the past winter. There are very many less bees in this (Harrison) county than there were three years ago. I put 50 colonies into my cellar last November, and on April 5th I took them all out alive, but in cleaning them up I found four were queenless. I now have 46 very strong colonies.

Everything considered, our outlook for a good crop of honey is not bad. We have had rather a cold, wet spring so far, but there is plenty of bloom now, and plenty in prospect. Plenty of bloom I think cuts a bigger figure in the business than anything else—it does with me, at any rate. Probably with those that have an abundance of bloom, something else is what they desire, as in all cases it is what we haven't got in our possession is what we desire the most.

In a late number of the BEE JOURNAL Father Langstroth and the "Langstroth Fund" were mentioned. For several years I have had a desire to contribute something

to Father Langstroth, and as many times I have persuaded myself that I was not able, or could not spare the money. So now I have hit upon a plan that will stop this nonsense, and force myself to do what I know is right. It is this:

When I cleaned up my colonies, or hives, after taking them out of the cellar, I watched closely for the best colony in the yard—the one with the most bees, honey and brood. Finally I found it, and I put Father Langstroth's name on the back of the hive, and the proceeds of that colony shall go to the Grand Old Bee-Master this season; and I may get in the habit of it, for all I know, and keep it up year after year. Why not? I owe it to him. I have used his inventions, and have been very successful for ten years, but I am a little ashamed that I have to pound myself into it.

E. J. CRONKLETON.

Dunlap, Iowa, April 24.

[Good for you, Bro. Cronkleton! We hope others will follow your excellent example, and set aside one or more colonies to work for Father Langstroth. If blessed with a good season, and your plan is generally followed, the "Langstroth Fund" next fall will be something grand. Of course, what has been given the past year has been a great help to Father Langstroth, as he has frequently acknowledged. Let us not grow weary in well doing.—EDITOR.]

Bee-Notes from Tennessee.

On account of the short crop last fall quite a number of my colonies went into winter without sufficient stores, and about a dozen colonies died from starvation. Finding this condition, I have fed liberally about 20 colonies, and the whole apiary was booming in March, until the 22nd. The woods were getting green, peach and plum trees were in full bloom, and apple trees beginning to put on their white robes. Then came heavy frosts, the mercury reaching 12 degrees above zero on the 27th.

Not only is all prospect of fruit blasted, but the tender twigs of many trees, and the raspberry vines, were frozen. The pastures and forests, so green before, became brown and dried. Bees have kept in-doors almost continually since. In some places I find the buds on lindens dead from the freeze. White clover is now beginning to look well again—there appears to be a fine crop in prospect. We are still having frosts, but the temperature is gradually warming up.

Inasmuch as there have been placed such neat and tasty headings in the various other departments in the BEE JOURNAL, why not make an improvement in the "Sunny Southland" heading? My objection is to the typography of "Southland." Pardon me for suggesting that the twists and turns of the first letters, and their general appearance, make me think of a

black snake with white spots on it. Did this never occur to "ye editor?"

This is the "onliest" criticism I have to offer on the contents or make-up of the ever-welcome BEE JOURNAL.

LEWIS K. SMITH.

Gainesboro, Tenn., April 14.

[No, Bro. Smith, we hadn't before noticed the "snaky" appearance of the heading you refer to—and we have seen lots of snakes in our day, too. But please don't think they were in our boots, for that would be rather bad for a strong anti-saloon man. No, those snakes were seen out on an Ohio farm. If Mrs. Atchley should ever get frightened at the snake-like part of that heading, we'll have to do something about it, and may be before that time. Glad you have no greater criticism to offer, Bro. Smith.—EDITOR.]

Bees in Good Condition.

I have taken my bees out of the cellar at last. They were put into winter quarters the first of November, and taken out April 15th—5½ months without a flight—and all came out in good condition but two colonies, and they died for the want of something to eat, and I would have been in the same fix if I had not hustled around; but I did manage to keep the spark of life in me, and now I am planning for a big honey crop this season, though it may be all planning and no honey, but we won't borrow trouble, but look on the bright side. If Mr. Wilson would only tell me what kind of a honey-flow we would have in this part of Wisconsin, then we could get ready for it, and not get "fooled;" but I suppose that he has no jurisdiction over the honey-flow of the northwest corner of this State.

Don't think I have the "blues," for I am not made that way, when I get 140 pounds per colony, spring count, and my neighbors did not get 10 pounds per colony. Not that I rejoiced at their failure, but at my "good luck," as they tell me I have with bees.

I sold all my honey, and had orders that I could not fill. No, I did not mix anything with my honey so that it would fill the orders, but I told my customers that I would fill their orders next season.

A. E. BRADFORD.

Hammond, Wis., April 17.

Why Queenless Bees in Spring?

Ever since I have kept bees it has been my delight to watch them and learn their habits. I see on page 467 the writer thinks that so many become queenless in the spring because the queen is more tender after they commence to lay in the spring, and the cold snaps "do them up." I think that so many queenless colonies in the spring come from virgin queens that hatch out on the outside frame after we

have had 10 or 12 days of cold weather. We will say that to-day is a nice, warm day, and the queen gets on the outside frame and lays a patch of eggs about the size of a man's hand. It turns cold right off, and the queen goes to the center of the colony and stays there until it warms up. This outside frame of bees don't know what has become of the queen—everything is quiet for 10 or 12 days, so they build a queen-cell, and if the weather stays cold so the bees do not stir around until this cell hatches out, this virgin will slip around among the bees and kill the old queen. As it is too early for drones, some of the bees get mad about the way business has been carried on, so they kill this virgin queen, and that is the way, I think, so many colonies become queenless in the spring.

Last week I found two colonies that had one cell in each hive on the outside frame, but the queens were laying eggs around the cells, so the bees were tearing them down.

G. W. NANCE.

Anthony, Iowa, April 20.

CONVENTION DIRECTORY.

Time and place of meeting.

1894.
May 15.—Northern Illinois, at Gullford, Ill.
B. Kennedy, Sec., New Milford, Ill.
Aug. 16.—East Tennessee, at Whitesburg, Tenn.
H. F. Coleman, Sec., Sneedville, Tenn.
1895.
Feb. 8, 9.—Wisconsin, at Madison, Wis.
J. W. Vance, Cor. Sec., Madison, Wis.

[E] In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRES.—Emerson T. Abbott....St. Joseph, Mo.
VICE-PRES.—O. L. Hershiser....Buffalo, N. Y.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York....Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.
147 South Western Avenue.

The Amateur Bee-Keeper,

is the name of a neat little pamphlet designed for the class its name indicates—amateurs and beginners in bee-keeping. It is written by Mr. J. W. Rouse, of Missouri, a practical apiarist and helpful writer. It contains over 60 pages, and we will send it postpaid for 25 cents; or club it with the BEE JOURNAL for one year—both for only \$1.15.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Mar. 24.—The honey market will be very quiet for the balance of the season. We will not do much business until new honey comes in. We cannot quote prices but will obtain the best possible price on what little stock we will sell until early fall. Beeswax is very active at 25@26c. J. A. L.

ALBANY, N. Y., Mar. 23.—The honey market is very slow now. The demand is about over on comb. Some extracted wanted at 6c.; if dark color, 5c.

Beeswax, 26@27c.

H. R. W.

CHICAGO, ILL., Mar. 15.—There has been a good deal of comb honey sold in the last few days, so that our stock of the best grades is now reduced. We obtain 14@15c. for choice white. Dark is hard to move at 10@12c. Extracted is very quiet, selling at from 4@7c.

Beeswax is in good demand at 23@25c.

R. A. B. & Co.

CINCINNATI, O., April 18.—Demand is exceedingly slow for all kinds of honey. We quote 12@15c. for best white comb, and 4@8c. for extracted honey. Arrivals and offerings far exceed the demand.

Beeswax is in good demand, at 22@25c. for good to choice yellow.

C. F. M. & S.

KANSAS CITY, Mo., Apr. 6.—We have had an exceedingly slow trade on honey this season, and prices ruled comparatively low. We quote to-day: No. 1 white comb, 1-lb., 14@15c.; No. 2, 13@14c.; No. 1 amber, 12@13c.; No. 2, 10@11c. Extracted, 5@7c.

Beeswax, 20@22c.

C-M. C. Co.

BUFFALO, N. Y., Apr. 28.—The market is very quiet. Fancy comb, 13@14c.; choice, 11@12c.; buckwheat, 8@9c. Indications are that stock on hand will be closed out before new arrives. Beeswax, 25@58c. B. & Co.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 44 and 46 So. Water St.
R. A. BURNETT & Co., 161 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMOMS-MASON COM. Co., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Great Premium on page 605!

May-Flowers and Mistletoe is the suggestive name of a book of over 250 pages containing selections of poetry and prose for all seasons, for older boys and girls, from the best writers of the day, with dialogues, motion songs, and drill exercises for smaller children. It is suitable for rhetorical exercises in the school and entertainments given by church, library and benevolent societies. Beautifully illustrated, and each poem or selection set in a colored border. Cloth-bound; size, 8x10 inches; price, postpaid, only \$1.00. Clubbed with the BEE JOURNAL for one year—both for \$1.75; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year.

Advertisements.

FOR SALE—1000 or less. Mt. Brood-combs, 10c. each—packed for shipment. **Bee-Keepers' Supplies, etc.** Write for Circular. **JNO. NEBEL & SON.** 18A4t **HIGH HILL, Montg. Co., MO.**

IMPORTED 1893 CARNIOLANS, \$5 each: 1893 home-bred tested, \$2; untested, bred from imported mothers that produce only gray bees, \$1. Add \$1 each for foreign countries. **By mail anywhere.** 16A4t **MRS. FRANK BENTON, Charlton Heights, Md.**

A Great Secret Of your success will be in getting my Italian Queens. Golden or Leather-Colored, either strain. Untested 60 cts. each. Address all order with the cash, to 19A2 **J. H. COLLINS, Bardwell, Ky.**

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At panic prices: No 1 Sections, 4 1/4 x 4 1/4 x 1 1/4 or 7-to-the-ft., 500 for \$1.50 1000 for \$3.00; 5000 for \$12.50. No. 2 Sections, \$2.00 per 1000. Write for free Catalogue and Price List, to **J. J. BRADNER,** MARION, IND. **BEE-HIVE.** 19-22-4-6 Mention the American Bee Journal.



MUCH PLEASED.

MRS. JENNIE ATCHLEY, Beeville, Tex.
Queen arrived safe and sound. I was much pleased with her appearance, and also with your promptness and accuracy in keeping promises. It is a pleasure to do business that way. Respectfully, **W. M. DOMER.** Floyd, Pa., April 7, 1894.

Untested Queens like this, \$1.00. See my ad. on page 607. **JENNIE ATCHLEY.**

FIRST SWARM APR. 4

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W. H. PRIDGEN,

19A4t **CREEK, Warren Co., N. C.**
Mention the American Bee Journal

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See Offer page 581.